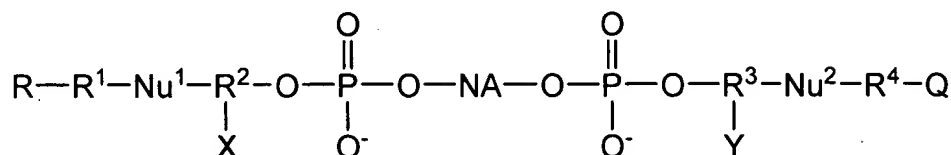


This listing of claims will replace all prior versions, and listings of claims in the application:

1-31. (Canceled)

32. (Previously presented) A probe nucleic acid having the formula



wherein,

NA is a nucleic acid chain comprising nucleic acid monomers selected from the group consisting of natural nucleic acids, modified nucleic acids and combinations thereof:

R¹, R², R³ and R⁴ are linker moieties independently selected from the group consisting of substituted or unsubstituted alkyl and substituted or unsubstituted heteroalkyl;

Nu¹ and Nu² are members independently selected from the group consisting of nucleotide residues and nucleoside residues;

R is a molecular energy transfer donor;

Q is a molecular energy acceptor; and

X and Y are the same or different and are non-nucleic acid stabilizing moieties that interact to bring R and Q into operative proximity, thereby enabling transfer of energy from R to Q, wherein said probe nucleic acid sequence is not hybridized to a target nucleic acid.

33. (Currently amended) The probe nucleic acid compound according to claim 32, wherein said molecular energy transfer donor is a fluorophore.

1 34. (Currently amended) The probe nucleic acid compound according to
2 claim 32, wherein said molecular energy acceptor is a fluorescence quencher.

1 35. (Currently amended) The probe nucleic acid compound according to
2 claim 32, wherein X and Y are both hydrophobic moieties.

1 36. (Currently amended) The probe nucleic acid compound according to
2 claim 35, wherein X and Y are members independently selected from the group consisting of
3 saturated hydrocarbons, unsaturated hydrocarbons, steroids, fatty acids, fatty alcohols and
4 hydrophobic peptides.

1 37. (Currently amended) The probe nucleic acid compound according to
2 claim 32, wherein natural nucleic acids are members selected from the group consisting of
3 deoxyribonucleotides, ribonucleotides and combinations thereof.

1 38. (Currently amended) The probe nucleic acid compound according to
2 claim 32, wherein said modified nucleic acids are peptide nucleic acids.

1 39. (Currently amended) The probe nucleic acid compound according to
2 claim 32, wherein said nucleic acid monomers are joined by linkages that are members
3 independently selected from the group consisting of phosphodiesters and modified
4 phosphodiesters.

1 40. (Currently amended) The probe nucleic acid compound according to
2 claim 39, wherein said modified phosphodiesters are members selected from the group
3 consisting of phosphorothioates and phosphoramidates.

1 41. (Currently amended) The probe nucleic acid compound according to
2 claim 32, wherein said nucleic acid chain further comprises a hybridization enhancing moiety.

1 42. (Currently amended) The probe nucleic acid compound according to
2 claim 41, wherein said hybridization enhancing moiety is a member selected from the group
3 consisting of intercalating agents, minor groove binders and modified exocyclic bases.

1 43. (Canceled)

1 44. (Previously Presented) The probe nucleic acid compound according to
2 claim 32, wherein said compound is immobilized on a solid surface.

1 45. (Currently amended) A method for amplifying a polynucleotide, wherein
2 a probe nucleic acid compound according to claim 32 is a primer in said method, said method
3 comprising:

4 (a) hybridizing said primer to said polynucleotide; and

5 (b) amplifying said polynucleotide.

1 46. (Currently amended) The method according to claim 45, wherein said
2 amplifying is a member selected from the group consisting of polymerase chain reaction (PCR),
3 nucleic acid sequence based amplification (NASBA), strand displacement amplification (SDA)
4 and combinations thereof.

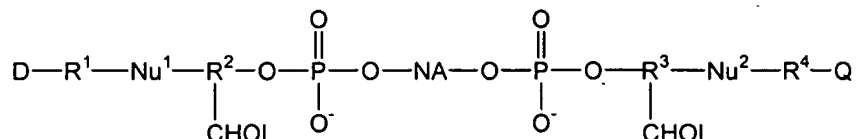
1 47. (Currently amended) A method for detecting or quantitating a nucleic
2 acid, wherein the probe nucleic acid compound according to claim 32 is used as a probe, said
3 method comprising:

4 (a) hybridizing said compound to said nucleic acid; and

5 (b) detecting a change in fluorescence of said compound, thereby detecting or
6 quantitating said nucleic acid .

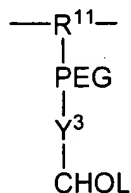
1 48. (Previously Presented) The method according to claim 47, wherein said
2 method comprises a member selected from the group consisting of 5'-nuclease assay, rolling
3 circle amplification and combinations thereof.

50. (Currently amended) A probe nucleic acid ~~compound~~ having the formula:



wherein said probe nucleic acid sequence is not hybridized to a target nucleic acid.

51. (Currently amended) The probe nucleic acid compound according to claim 50, wherein R²-CHOL and R³-CHOL are independently selected and have structures according to the formula:



wherein,

R^{11} is a member selected from the group consisting of substituted or unsubstituted alkyl and substituted or unsubstituted heteroalkyl;

PEG is polyethylene glycol;

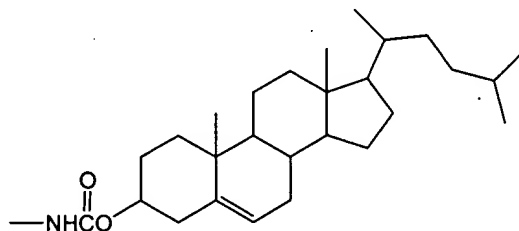
Y^3 is an organic functional group adjoining said PEG to said CHOL.

52. (Currently amended) The probe nucleic acid compound according to claim 51, wherein said PEG has from about 2 to about 20 ethylene glycol subunits.

53. (Currently amended) The probe nucleic acid compound according to claim 51 in which R^{11} is substituted or unsubstituted alkyl.

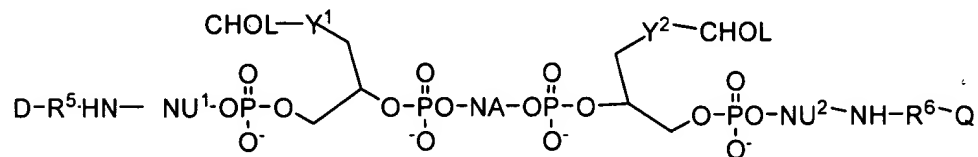
54. (Currently amended) The probe nucleic acid compound according to claim 53, wherein R^{11} is C_1 - C_6 substituted or unsubstituted alkyl.

55. (Currently amended) The probe nucleic acid compound according to claim 51, wherein Y^3 -CHOL has the structure:



56. (Currently amended) The probe nucleic acid compound according to claim 50, wherein Nu^1 and Nu^2 are nucleotides having an exocyclic amine group to which $-R^1$ -D and $-R^4$ Q are attached, respectively.

57. (Currently amended) A probe nucleic acid compound having the formula:



wherein,

NA is a nucleic acid sequence;

Nu¹ and Nu² are members independently selected from the group consisting of
nucleotide residues and nucleoside residues;

Y¹ and Y² are linking groups independently selected from the group consisting of
substituted or unsubstituted alkyl and substituted or unsubstituted
heteroalkyl;

R⁵ and R⁶ are linking groups independently selected from the group consisting of
substituted or unsubstituted alkyl and substituted or unsubstituted
heteroalkyl;

D is a donor of light energy; and

Q is a quencher of light energy,

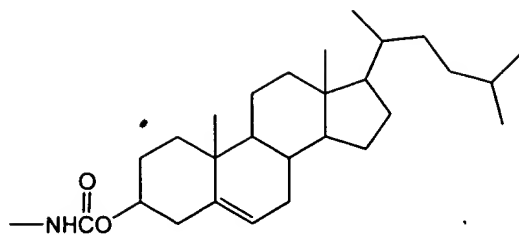
wherein each CHOL interacts with the other CHOL to bring D and Q into
operative proximity, thereby enabling transfer of energy from D to Q, and
wherein said probe nucleic acid sequence is not hybridized to a target nucleic
acid.

58. (Currently amended) The probe nucleic acid compound according to
claim 57, wherein Y¹ and Y² are members independently selected from substituted or
unsubstituted heteroalkyl.

59. (Currently amended) The probe nucleic acid compound according to
claim 58, wherein Y¹ and Y² are polyethylene glycol.

60. (Currently amended) The probe nucleic acid compound according to
claim 59, wherein said polyethylene glycol has from about 2 to about 20 ethylene glycol
subunits.

61. (Currently amended) The probe nucleic acid compound according to
claim 57, wherein Y¹-CHOL and Y²-CHOL have the structure:



3

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62. (Cancelled)